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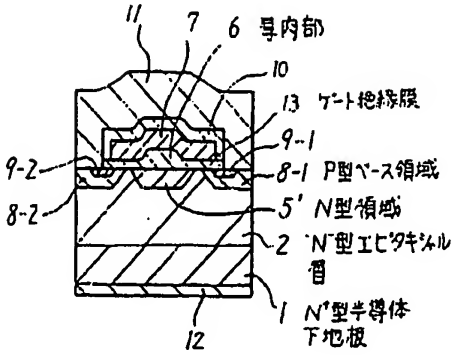
TITLE : VERTICAL INSULATED GATE FIELD EFFECT TRANSISTOR



ABSTRACT : PURPOSE: To reduce an ON resistance and avoid punch through by a method whereln a thick part is provided at a part of a gate insulating film apart from base regions and a high impurity concentration region with a conductivity type same as that of a substrate is provided in the main surface of the substrate directly under the thick part of the gate insulating film.

CONSTITUTION: On the main surface of a substrate composed of an N⁺type semiconductor foundation board 1 made of silicon and an N⁻type epitaxial layer 2 built up on the foundation board 1, P-type base regions 8-1 and 8-2 are provided and, at the same time, a gate insulating film 13 is formed on the main surface of the substrate including the base regions 8-1 and 8-2. A thick part 6 is provided in the film 13 at the position apart from the regions 8-1 and 8-2 and, further, an N-type region 5' which has a higher impurity concentration than its surroundings is provided in the substrate directly under the thick part 6 apart from the regions 8-1 and 8-2. With this constitution, the spread of a depletion layer between the regions 8-1 and 8-2 and the substrate can be suppressed.